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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,416	10/01/2003	Yoshiaki Kawato	NITT.0157	5113
38327	7590	07/26/2004	EXAMINER	
REED SMITH LLP 3110 FAIRVIEW PARK DRIVE, SUITE 1400 FALLS CHURCH, VA 22042			OMETZ, DAVID LOUIS	
			ART UNIT	PAPER NUMBER
			2653	

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/674,416	KAWATO, YOSHIAKI	
	Examiner	Art Unit	
	David L. Ometz	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-11 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/941,795.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/1/03</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/941795, filed on 8/30/01.
1. Figure s 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because in figure 6, electrode 28a is pointing to the wrong element. Electrode 28a's reference line should point to the layer directly below that to which it is currently pointing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The disclosure is objected to because of the following informalities: the continuing data on page 1 should be updated to include the maturing of application 09/941795 into US Pat. No. 6657823. Appropriate correction is required.
4. Claims 1, 3, 6, 10 are objected to because of the following informalities: in claim 1, line 3, --layer-- should be inserted after "ferromagnetic"; in claim 1, line 7, "second" should be changed to --third--; in claim 1, line 8, "second" should be changed to --fourth--; in claim 1, line 14, "in" should be deleted; in claim 3, line 2, "shield" should be made plural; in claim 6, line 1, --of-- should be inserted after "resistances"; in claim 10, line 1, "included" should be changed to --include--. Appropriate correction is required.
5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6657823. Although the conflicting claims are not identical, they are not patentably distinct from each other because Kawata '823 claims all that which is claimed in the instant application with the exception of the inclusion of shields into the reproducing sensor and the substantially same width of the MR elements. However, Kawata '823 disclose these elements and therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include shields in the sensor so as to protect the sensor from stray magnetic fields while making the MR elements the same in width would have been a matter of design choice for the particular process involved in making the reproducing sensor and therefore no unobvious result exists.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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8. Claims 1, 3-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Gill (US Pat 6275363). Gill shows a reproducing sensor in figure 11 that has: a pair of spin tunnel junction magnetoresistive elements (238-antiferromagnetic, 224/222/226--first ferromagnetic pinned, 218--insulating spacer of aluminum oxide, and 210--second ferromagnetic free layer) and (244--antiferromagnetic, 230/228/232/234/236--fourth pinned ferromagnetic layers, 220--insulating spacer, and third ferromagnetic free layer 212) for changing electric resistance by an external magnetic field reversely from one another (i.e. one increases in resistance while the other decreases in resistance); a non-magnetic conductive layer 208 interposed between the pair of magnetic resistance layers; the magnetization of the pinned layer 226 is antiparallel with pinned layer 236; a pair of electrodes inherently sandwich the above noted layers so that current  $I_T$  flows perpendicular to the film surfaces of the multi-layers; the multi-layers are connected in series through the conductive spacer 208; shields "S1/S2" (fig. 6) shield the sensor; and the first and second MR elements are almost the same width; as per claim 3 the shields and MR elements share the same surface next to the recording medium as seen in figure 6; the first ferromagnetic layers 224/222/226 has a three-layer construction of a ferromagnetic layer 224, a non-magnetic metal film 222 (made of Ru), and another ferromagnetic layer 226 which is antiparallel to the layer 224; the fixing direction of the magnetization is reversed by the second ferromagnetic layers of the pair of magnetoresistive layers.

9. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited all show magnetoresistive heads with various arrangements for the ferromagnetic, antiferromagnetic, and spacer layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Ometz whose telephone number is (703) 308-1296. The examiner can normally be reached on M-W, 6:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David L. Ometz  
Primary Examiner  
Art Unit 2653

DLO  
7/21/04

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